OTOLOGY

UNDER THE CHARGE OF

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Summary of Report on Diseases of the Ear, Nose and Throat in Egypt from 1915.—BARRETT (*Jour. Laryngol., Rhinol. and Otol.*, April, 1918) was instrumental in establishing aural clinics at the Australian General Hospital, in conjunction with the ophthalmic clinic, with the result of the extension of this service throughout the British Expeditionary Forces, it being found that the aural work was heavier than the ophthalmic in the beginning, largely on account of the outbreak of measles among the Australian troops soon after landing in Egypt. The number of cases of aural complication of one kind and another as the result of this epidemic, in addition to cases which were a recurrence of a previous suppurative disease of the middle ear, ran into the thousands, there being also a steady inflow of new cases without predisposition, the result of diseases contracted in the immediate service. Of nearly 1500 cases there were 95 of acute inflammation of the middle ear, 435 cases of chronic middle-ear disturbance of catarrhal origin, 139 cases of concussion deafness and 143 cases of otitis externa. There being generally about 100 cases of measles under treatment, a large number of cases of acute inflammation of the middle ear might be expected as a consequence of the measles, but many occurred without apparent association. The severity of these cases was so unusual that pathological examinations were carefully made, but with few exceptions no other organism than the staphylococcus was found. The cases of otitis externa included furunculosis, of which there was a large number, a cause of deafness quite common in the Egyptian service, with an origin not clearly explainable. There were many complaints of impairment of hearing referred to shell shock. A number of these cases were falsifications, but the considerable number which were genuine presented the unusual symptoms of unilateral deafness due to gun-fire. In some cases the membrane was ruptured, but these were not very numerous. Of the bilateral cases of concussion deafness the majority were hysterical, and these made good recovery when placed on rigid treatment and subjected to faradization of the mastoid region. The difficulty of discriminating between the real and the false cases of deafness is much greater than in the cases of blindness. A number of mis-statements were made and a number of devices were resorted to to detect the fraud. Of these the most successful were the bandaging of the eyes and the testing of the hearing at different distances by unknown sources of sound, the man examined being unaware of the distances at which the noise-producing apparatus was placed and giving answers which revealed malingering by their discrepancy. Furthermore, the soldiers were usually unaware of the nature of the Rinné test by the tuning-fork or of the fact that in middle-ear deafness a tuning-fork placed on the vertex is not infrequently heard best in the damaged ear or in the ear artificially plugged. By these and other devices it was possible to show that in a certain number of cases the degree of hearing possessed did not correspond with the physical appearance of disease and that it varied from minute to minute. But these cases were very few in number and belonged to what the author calls the "pathological residuum of the army." Within a year the aural service in Egypt was well organized and a large number of clinics had been established, aurists were placed in the principal hospitals and, as time progressed, were placed also in the stationary hospitals, in casualty clearing stations and even in the field ambulances. The functions of these aurists in the base hospitals and on the lines of communication were essentially different, the usual practice being to transfer a man to the base who reports sick with ear, nose or throat disease for the first time unless the case is shown on examination to be a trivial one. A case so referred to the base hospital is thoroughly examined and treated and returned to the front, a full clinical report being sent with him. Such a case cannot be sent to the base a second time unless symptoms have redeveloped and without seeing an aurist in the field ambulance or in the lines of communication. Consequently it was the business of the aurist placed on the lines of communication to treat and return to the front all comparatively unimportant cases and to transmit to the base as speedily as possible anything of importance. Statistics show that the aural cases constitute from 60 to 75 per cent. of the total work of the aurist, nasal, pharyngeal and laryngeal diseases constituting 25 to 30 per cent. The purpose of the aural practice being the production and maintenance of efficient soldiers, the problem became one largely of treatment of otitis media and furunculosis, the method of treatment being thorough, daily cleansing of the external auditory canal and middle ear by the patient by means of a cotton stick, the auricle being drawn upward and backward by the finger tips of the opposing hand and the depth of the canal and the middle ear carefully dry-cleansed in the manner mentioned, this cleansing being followed by the instillation of alcohol, with 6 per cent. of carbolic acid lotion; the fluid being allowed to remain in the ear five minutes and the ear again dry-cleansed and stopped with cotton, each case being obliged to report once a week for inspection of the ear. The result of this simple treatment has been gratifying, and is due partly to the fact that the soldier is accustomed to obey orders and therefore carefully followed directions. In reference to shell-shock deafness the author is in doubt as to its existence, having never seen such a case in his experience in the Egyptian service, although other aurists have reported cases in which the impairment of hearing seemed labyrinthine in its origin.

War Injuries and Neuroses of Otological Interest.—From the seven cases here recorded, JONES-PHILLIPSON (*Jour. Laryngol., Rhinol. and Otol.*, April, 1918) concludes that certain parts of the organ of Corti are frequently more seriously damaged than others and that the labyrinth may be rendered hypo- or hyperexcitable, its normal equilibrium being much altered, it being evident also that a greater effect upon the internal ear is produced through an intact drumhead and one which stands the force of the explosion; and that the effect is less when the membrana tympani lacerates and is still less in the conditions of previous loss of this membrane. In the author's opinion shell-concussion deafness is due to three factors: (1) cerebral concussion; (2) overstrain, and (3) fatigue of the organ of Corti, the former being due to violent oscillations of the perilymph communicated to the organ of Corti and the latter to continuous violent noises or explosions at close quarters. In temporary or permanent disorganization of the conductive apparatus the prognosis depends on the recovery of these parts. In one class of cases the patient experienced a great shock and was in some instances buried by the proximate shell explosion. He became suddenly deaf and also dumb. In some instances also he had paresis of the arm or leg, or both, the higher centers being here involved. Frequently there was an almost sudden improvement in hearing in a few days as the shock passed off and the disappearance of nervous symptoms generally when the patient was removed from the firing line. In another class of cases a portion of deafness remained to be more or less slowly recovered from by the return of the internal ear to a normal or nearly normal condition. In the third class of cases, including structural damage, there is a more or less permanent imperfection of function—a ruptured membrane, a dislocation of the small bones from one another or the stretching of their attachments to the tympanic wall. These are only slowly recovered from in many instances, but the author is able to quote from cases seen three or four months later and showing a considerable recovery of hearing.

Primary Disease of the Labyrinth as the Result of Focal Infection.—SHAMBAUGH (*American Laryngological, Rhinological and Otological Society*, reported in *Laryngoscope*, January, 1918). The clinical phenomena observed in cases of primary involvement of the internal ear as the result of focal infection were quite definite, although the symptoms varied more or less widely in different cases. The defect in hearing was always quite characteristic. It began as a defect in the upper part of the tone scale, while the hearing at the lower part of the tone scale remained even after the defect for the higher notes had become quite extensive. The loss of hearing might consist of a defect more or less circumscribed in the middle of the tone scale. Paracusis willisiana was never a symptom in these cases, and tinnitus aurium was seldom the annoying symptom which it so frequently was in cases of otosclerosis. In most cases both ears became involved sooner or later, the shortening of bone conduction, in such event, being always present. In one-sided involvement the positive Rinné would be changed to a negative in those cases in which the defect in hearing was quite marked. Symptoms arising from the vestibular part of the internal ear constituted a very important part of the clinical phenomena observed in many of these cases. Primary diseases of the internal ear constituted the most frequent cause of vertigo. Primary degeneration of the vestibular nerve occurred quite independently of a similar process involving the cochlear nerve. In these cases an occasional attack of vertigo was the only symptom indicating disease of the labyrinth. Three distinct types of primary degeneration in the labyrinth might be encountered: (1) where the cochlea alone was involved, producing nerve deafness and more or less tinnitus; (2) where the vestibule was involved simultaneous with the cochlea, producing, as a rule, occasional attacks of vertigo in addition to symptoms arising from disease of the cochlea; (3) where the vestibular nerve alone was affected and where all symptoms indicating disease of the labyrinth might be absent, except for possible occasional attacks of vertigo. The progress of the disease differed widely in different cases. There might be a gradual increasing degeneration of the parts involved; the progress of the degeneration might be accelerated by acute exacerbations; or the acute attacks might be followed by a long period of quiescence. Primary degeneration of the labyrinth was not infrequently a complication of syphilis, hereditary or acquired. It was also observed as a sequel of the infectious fevers, especially mumps, typhoid, measles and scarlet fever. In a large percentage of cases, however, the etiology was not accounted for. It was in these cases that focal infection was suggested as a possible cause. The similarity between the manner in which the labyrinth involvement took place and the involvement of other nerves in which focal infection was known to be the cause, suggested this conclusion.

Concussion Injury of the Ear.—SHUTER (*Jour. Laryngol., Rhinol. and Otol.*, London, February, 1918) states that he has seen a large number of cases on different fronts, and differentiates between machine gunners and concussion deafness; in the former there are more frequently instances of deafness, in the latter a more general lowering of the whole tone scale, they occur more commonly in cases of preëxisting middle-ear disease, and are due not to acoustic concussion but to the pressure waves caused by a shell explosion, as by the explosion of a German mine in a confined space, in trench cases and after proximate bomb explosions, rendering the patient temporarily unconscious and inappreciative of sound for forty-eight hours. These causes are presented for secondary examination, sometimes months after the injury, with the following combination of symptoms, marked decrease in hearing, by bone conduction, tinnitus, paracusis, better aërial hearing in a quiet room and hearing tones of low pitch aërially better in proportion than tones of high pitch.

PATHOLOGY AND BACTERIOLOGY

UNDER THE CHARGE OF

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Histopathology of Muscle in Gas Gangrene: Contusion, Ischemia and Infection.—RENE SAND (*Ambulance de l'Ocean*) discusses the various pathological changes in the structure of muscles in gas gangrene under the three following heads: (1) lesions due to mechanical cause; (2) lesions due to circulatory disturbances; (3) lesions caused by toxic